

CLAIMS

What is claimed is:

1. An apparatus comprising:
a stacking conveyor conveying packets so that the conveyed packets become stacked together in a standing up configuration as an array of packets; and
first and second gripping members automatically controlled so that the first and second gripping members mechanically move independently of each other to grip the array between the first and second gripping members and move the gripped array to a different location for processing of the array.
 2. An apparatus as in claim 1, further comprising:
first and second endless belts on which the first and second gripping members are mounted, respectively, so that the first and second gripping members mechanically move independently of each other.
 3. An apparatus as in claim 1, further comprising:
first and second drive motors for driving the first and second gripping members, respectively, so that the first and second gripping members mechanically move independently of each other.
 4. An apparatus as in claim 1, further comprising:
first and second endless belts on which the first and second gripping members are mounted, respectively; and
first and second drive motors for driving the first and second endless belts, respectively, the first and second drive motors and the first and second endless belts being configured so that the first and second gripping members mechanically move independently of each other.
 5. An apparatus as in claim 1, wherein the first and second gripping members are paddles.
 6. An apparatus as in claim 1, wherein the first and second gripping members have surfaces which contact the array and have sufficient friction for gripping and moving the gripped
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array.

7. An apparatus as in claim 1, wherein the first and second gripping members are paddles having surfaces which contact the array and have sufficient friction for gripping and moving the gripped array.

8. An apparatus as in claim 1, wherein the packets are pillow-type bags.

9. An apparatus as in claim 1, wherein the first and second gripping members are automatically controlled so that the first and second gripping members mechanically move independently of each other to grip the array between the first and second gripping members as the array is being conveyed in a conveying direction by the conveyor.

10. An apparatus as in claim 9, wherein the first and second gripping members are automatically controlled by positioning the first gripping member at a stationary position downstream of the array as the array is conveyed by the conveyor to cause contact to be established between a downstream end of the array and the first gripping member, and moving the second gripping member to contact an upstream end of the array as the array is conveyed, to thereby cause the array to be gripped between the first and second gripping members.

11. An apparatus as in claim 9, wherein the first and second gripping members are automatically controlled by causing the first gripping member to move towards the array from downstream of the array as the array is conveyed by the conveyor to thereby cause contact to be established between a downstream end of the array and the first gripping member, and moving the second gripping member to contact an upstream end of the array as the array is conveyed, to thereby cause the array to be gripped between the first and second gripping members.

12. An apparatus as in claim 1, wherein the array is moved by rotating the first and second gripping members while the array is gripped between the first and second gripping members.

13. An apparatus as in claim 1, wherein the array is moved by sliding the first and second gripping members while the array is gripped between the first and second gripping

members.

14. An apparatus as in claim 1, wherein the stacking conveyor conveys packets to produce a plurality of arrays of packets, the first and second gripping members being automatically controlled to sequentially grip each respective array and move the array to said different location.

15. An apparatus as in claim 1, wherein the first and second gripping members move the gripped array to a packaging station for packaging the array.

16. An apparatus as in claim 1, wherein gripping force between the first and second gripping members is changeable as the array is being moved.

17. An apparatus as in claim 1, wherein the stacking conveyor and the first and second gripping members are arranged so that packets and arrays continuously move downstream along a conveying/gripping/moving route.

18. An apparatus comprising:
a stacking conveyor conveying packets so that the conveyed packets become stacked together in a standing up configuration as an array of packets;
first and second gripping members; and
means for automatically controlling the first and second gripping members so that the first and second gripping members mechanically move independently of each other to grip the array between the first and second gripping members and move the gripped array to a different location for processing of the array.

19. An apparatus comprising:
a stacking conveyor conveying packets so that the conveyed packets become stacked together in a standing up configuration as an array of packets;
first and second endless belts on which the first and second gripping members are mounted, respectively;
first and second drive motors driving the first and second endless belts, respectively, the first and second drive motors and the first and second endless belts being configured so that the first and second gripping members mechanically move independently of

each other; and

a controller automatically controlling the first gripping member via the first drive motor and the first endless belt and automatically controlling the second gripping member via the second drive motor and the second endless belt so that the first and second gripping members mechanically move independently of each other to grip the array between the first and second gripping members and move the gripped array to a different location for processing of the array.

20. An apparatus as in claim 19, wherein the first and second gripping members are paddles.

21. An apparatus as in claim 19, wherein the first and second gripping members have surfaces which contact the array and have sufficient friction for gripping and moving the gripped array.

22. An apparatus as in claim 19, wherein the packets are pillow-type bags.

23. An apparatus as in claim 19, wherein the first and second gripping members are controlled to grip the array as the array is being conveyed.

24. An apparatus as in claim 22, wherein the first and second gripping members are controlled to grip the array as the array is being conveyed.

25. A method comprising:
conveying packets so that the conveyed packets become stacked together in a standing up configuration as an array of packets; and
automatically controlling first and second gripping members so that the first and second gripping members mechanically move independently of each other to grip the array between the first and second gripping members and move the gripped array to a different location for processing of the array.